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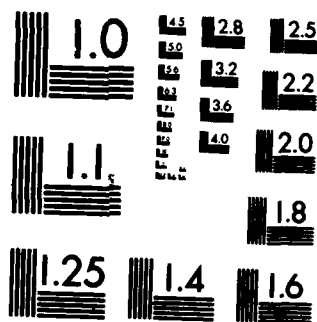
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THE NEW AIRCRAFT GENERATION

/Oesterreichische Militaerische Zeitschrift, No. 6, 1982, pp. 536-538;
German/

As early as 1979 it was already known that the Soviet Union was intensively working on a new generation of aircraft.* Prototypes were

*See Oesterreichische Militaerische Zeitschrift, No. 5, 1979, p. 435.

observed on the test airfield in Ramenskoye, and there were reports on a beginning series production. The types of aircraft in question covered the entire spectrum from fighter aircraft to a strategic bomber.

The latter is to go into series production next year, and the first operational regiment is expected in 1986. This type, called RAM-P (after Ramanskoye) in the West and given the NATO codename BLACKJACK, is a variable-geometry aircraft with an operational range of 6,400 to 7,500 km without refueling or auxiliary tanks and a maximum estimated speed of Mach 2.3. The combat altitude profile is a typical high-low-high one.*

*Aviation Week & Space Technology, 7 June 1982, p. 54.

Payload, which includes nuclear weapons and cruise missiles, is approximately 16,000 kg. Takeoff weight is at least 200 t.

It has considerable similarity to the American B-1 bomber. Production of the latter was halted by President Carter 1. June 1977. In October 1981 production was resumed. If one makes a comparative trace into the history of its development, it is seen that serious development efforts started in 1969.* Considering that the Soviet Union is not able to build

*See "The B-1 Strategic Weapon System," Oesterreichische Militaerische Zeitschrift, No. 4, 1982, p. 329.

large aircraft any faster than the United States, and if the development was not interrupted there as it was in the USA, then an analogy can be drawn which indicates that the Soviet Union has been engaged for a decade in the development of a strategic bomber. To that must be added the preliminary budgetary authorization for the billions of rubles required for this purpose.

The first 15 series-produced units of the B-1 are expected in 1986. Thus, there is almost a parallel development in the USA--with the interruption under President Carter--and in the USSR, assuming there were no such interruptions there. This is not based however on any references or publications, or even less any discussions on the matter, but on the evidence of a powerful arms industry in an aircraft sector which

is qualitatively catching up, although there may still be significant differences in the new aircraft generations.

Involved here, furthermore, are types of attack and fighter aircraft which are similar in their characteristics primarily to the RAM types, such as the RAM-L air superiority fighter, Mikoyan MiG-29, which will be ready for series production in 1985. This type has already been analyzed* in

*"The RAM-L Air Superiority Fighter, Counterpart of the F-18?",
Internationale Wehrrevue, No. 12, 1981, p. 1609.

detail: 1-man crew; length overall of 16.5 m; an empty weight of 9,000 kg; a payload of 4,000 kg; two turbojets for a maximum low-altitude speed of Mach 1.2 and at-height speed of Mach 2.3; service ceiling, 20,000 m; range for the optimum air interception with four air-to-air missiles, 800 km, and with an external tank, 1,100 km; look-down/shoot-down capability; estimated radar search and track ranges, 40 and 20 km, respectively. Other sources give this ratio as 100:70 km. Expected armament is the AA-9 missiles, which seem to be comparable to the American SPARROW missiles. The missiles have a warhead of approximately 45 kg and a maximum range of about 17 km. The AA-8 APHID missile is the probable one for close-range air combat. The aircraft has a built-in GSh-23 twin-barrel gun.

It is also mentioned in the professional literature that this aircraft seems to be either the equal of or superior to the F-18A or F-18L types. These comparative studies have also shown a great similarity of the aircraft to the F-15 fighter aircraft. With its initial testing with the home air defense, it is expected that the aircraft will also be introduced into tactical air units. The aircraft could also be of significance in combatting cruise missiles.

The RAM-K Sukhoi Su-27 is expected to be operational as a fighter aircraft in 1984. Equipped also with a look-down/shoot-down radar system, the aircraft is considered the equivalent to the McDonnell Douglas F-15 and Grumman F-14.

A noteworthy development is the follow-on type to the "battle aircraft" flown in World War II, and this is the type designated as RAM-J Sukhoi Su-25 FROGFOOT* and whose similarity to the A-10 close-support and antitank

*Interavia Air Letter, 11 August 1982.

aircraft from Fairchild is unmistakable. It is reported that the first squadron is already operating in Afghanistan, probably on a trial basis, and has proven itself very well. With a weight of 16.3 t and two Turbansky R-13-500 turbofan engines mounted on the top of the fuselage, the Stormovik battle aircraft is armed with a Gatling-type gun and ten underwing weapon pylons, or six wing hardpoints, according to another source. Gun armament consists of the Kalashnikov NK-23 and KK-30

aircraft guns (type designation also indicates caliber). The payload at a take-off weight of about 18,000 kg is given as 5,000 kg. Weapons variations can include bombs of 50 to 500 kg, laser-guided missiles, antiradar missiles (AS-9), as well as the AS-7 or AS-10 air-to-ground missiles. The AA-8 air-to-air missiles serve for self defense. Speed is about Mach 0.9 and operating range is 1,200 km.

The first Ilyushin-76 CANDID operating as an airborne warning and control aircraft and equipped with the appropriate radome and radar antenna rotating in the typical tower-like structure on the upper part of the fuselage is expected next year.

It has also been reported that an improved fighter version of the MiG-25 FOXBAT has been introduced into two regiments.* They are also

*Aviation Week & Space Technology, 7 June 1982; Interavia Air Letter, 11 August 1982, in an interview with General W. L. Creech, CO of the USAF's Tactical Air Command.

equipped with a look-down/shoot-down radar system. The new version is supposed to be faster than the F-15, although it can be outmaneuvered by the latter and fought effectively with modern missiles, such as the AMRAAM (Advanced Medium-Range Air-to-Air Missile) type. The MiG-25 fighter type has been given the designation MiG-25 FOXHOUND. Its armament includes the AA-9 air-to-air missile.

Laser-guided bombs have also been introduced. This was discovered already last year in East Europe. Furthermore, the semi-active laser-guided AS-10 missiles are part of the armament of the MiG-27, Su-17, and Su-24. Some fighter regiments in East Europe have already been fitted with pylons for the new AS-14 missiles, which are supposed to have double the weight of the AS-10.

In the last four years the Soviet Union has been producing daily three fighter aircraft. This quantitative growth is made possible by the generally very rapid and qualitatively improved development. In conjunction with this, efforts are being made to maintain an appropriate level of training. For this purpose more than 4,000 air-to-surface missiles were fired over the last 2 years, which is about ten times the American training quota for USAFE and 40% of the total USAFE inventory of air-to-surface missiles. The look-down/shoot-down radar system of the MiG-25 FOXHOUND was tested at the Vladimirovka test range against low-flying drones, which served to give a target representation of cruise missiles. The drones flew at an altitude of approximately 60 m, while the intercept fighter flew at approximately 6,000 m altitude and scored successful hits.

Other measures taken have been the replacement of the Yak-28 BREWERS still existing in Europe by the Su-24 FENCER. The latter has a range

which also encompasses Great Britain and large areas of France, while the Yak-28 was only able to cover the territory of the Federal Republic of Germany from bases in the GDR. The aircraft had been stationed only in the Soviet Union, but in the summer of 1982 the first 30 units of this aircraft type were transferred to the GDR. With an annual increase of 100 F-24 FENCERS, the number of aircraft now totals more than 500 units, which are primarily stationed in the western military districts; for example, there are two regiments in the Baltic Military District, with one of them in the Chernyakhovsk air station east of Kaliningrad near the Polish border, and the second one in Tukum in the Riga Region of the Latvian S.S.R. Two other regiments are assigned to the Carpathian Military District, specifically to the Ukrainian air force bases in Starokonstantinov and Gorodok. One regiment is stationed in the Far East. For a short time in 1979 a FENCER regiment was stationed at the Templin airport as part of the 16th Tactical Air Army. According to reports, the Soviet Union laid out a training facility at the Rossov training range which is supposed to approximate the Bitburg Air Base, West Germany (F-15).

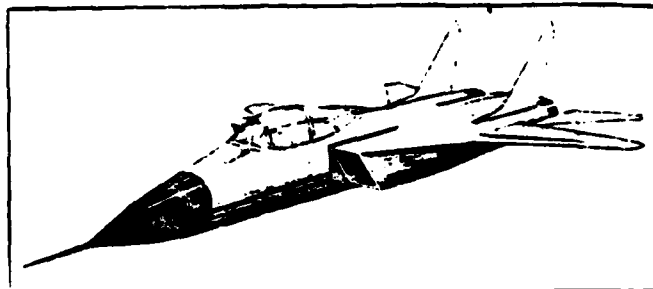
The Soviet Union has about 2,000 fighter aircraft in its Home Air Defense (PVO). This organization, along with the other components of the air forces, will undergo a reorganization under which there is a movement away from the PVO structure. Area regiments are being organized which are supposed to increase operational readiness and flexibility.*

*Aviation Week & Space Technology, ibid.

One of the envisaged goals of an air capability that increasingly is being described as offensive in nature is the deployment of 2,400 aircraft across from Europe. This would make it possible to strike key targets with continuous assaults of 300 to 400 aircraft. Included among these forces are also 200 Tu-26 (Tu-22M) BACKFIRE aircraft, including the improved BACKFIRE-B version which is characterized as having a greater range in addition to low-level capabilities. The total aircraft inventory of the Warsaw Pact air forces has been increased from 4,000 to more than 5,000, a growth of 25%.



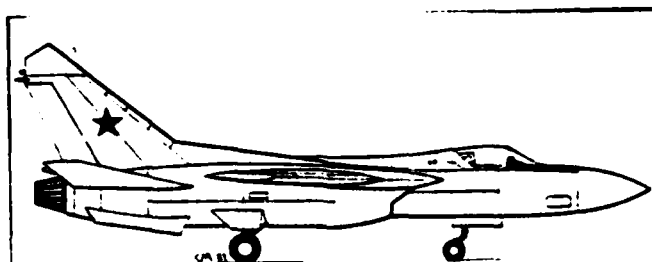
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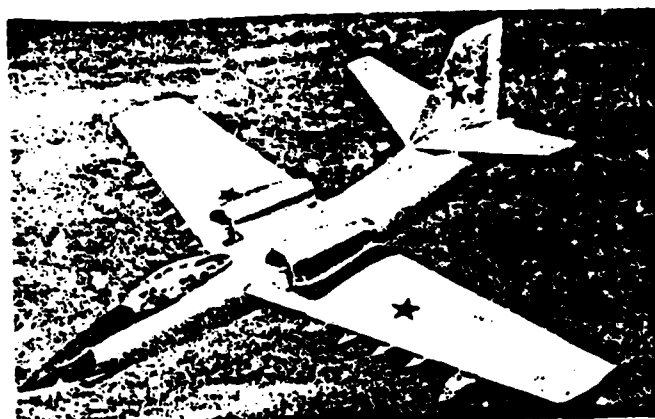
RAM-L MiG-29 Air Superiority Fighter



Southeast of Moscow is the Ramenskoye flight test center. The RAM designation of new Soviet aircraft types stems from the test activity there. Nearby in Zhukovskiy are subsonic and supersonic wind tunnels



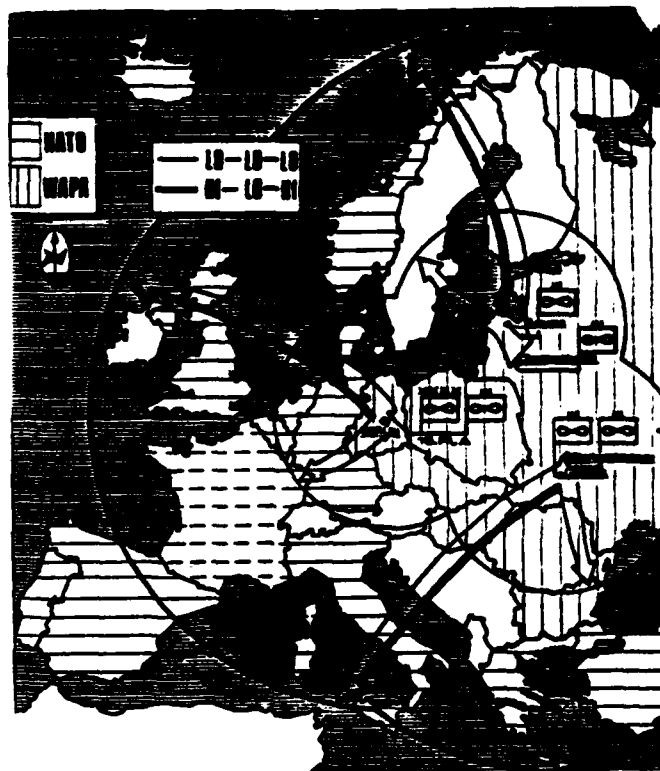
RAM-K Su-27 Fighter Aircraft



RAM-J Su-25 FROGFOOT Ground Support Aircraft, "Battle Flyer (Stormovik)"



Su-24 FENCER, described as the counterpart to the F-111 and TORNADO, is now also with the 16th Tactical Air Army in the GDR



Stationing of the Su-24 Air Regiments